

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
CHARLESTON DIVISION**

**IN RE: AQUEOUS FILM-FORMING
FOAMS PRODUCTS LIABILITY
LITIGATION**

MDL No. 2:18-mn-2873-RMG

**This Document relates to
ALL CASES**

**DEFENDANTS' REPLY MEMORANDUM IN SUPPORT OF THEIR MOTION FOR
PARTIAL SUMMARY JUDGMENT ON THE FIRST ELEMENT OF THE
GOVERNMENT CONTRACTOR IMMUNITY DEFENSE**

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Plaintiffs disregard binding and applicable law and try to manufacture factual disputes that are immaterial to the sole question before the Court: whether the government approved reasonably precise specifications for MilSpec AFFF. As a matter of law, Defendants satisfy both independent methods of establishing Element 1 of the government contractor defense (“GCD”).

First, the AFFF MilSpecs—which DoD indisputably wrote, revised, and repeatedly approved—are reasonably precise on their face. Plaintiffs do not and cannot dispute that the DoD-issued AFFF MilSpec required the use of fluorocarbon surfactants and imposed other chemical, physical, and performance requirements. Nor do they dispute that it is not feasible to make MilSpec AFFF without some amount of long-chain (C8) fluorosurfactants, including PFOA, PFOS, or compounds that may break down to them: Both the current MilSpec and Plaintiffs’ own declarant acknowledge this impossibility. Def. Ex. 13 (2020 MilSpec) § 6.6; Pl. Ex. 23 ¶¶ 28, 36.

Faced with these indisputable facts, Plaintiffs spend most of their Opposition arguing that the AFFF MilSpec did not “explicitly require” PFOA or PFOS. But, “government approval of equipment specifications, not design or *dictation* of them, is all that is required” to satisfy the first element of the GCD. *Dowd v. Textron, Inc.*, 792 F.2d 409, 412 (4th Cir. 1986) (per curiam) (emphasis added). Under the facts Plaintiffs themselves acknowledge, Defendants meet this standard.

Second, it is also undisputed that DoD continued—and continues today—to purchase and use MilSpec AFFF knowing it contained (and still contains) C8 fluorocarbon surfactants including PFOA and/or PFOS, the very defect Plaintiffs allege. In fact, Plaintiffs admit that DoD was aware by no later than 2000 that MilSpec AFFF contained PFOA and/or PFOS. Opp. 34–35.

Here again, this leaves Plaintiffs to counter by questioning immaterial factual matters, like what DoD knew before 2000 or whether its knowledge was “substantially complete” before 2016.

But Plaintiffs cite no support for such a “substantially complete” standard. There is none. Rather, cases like *Dowd, Ramey*, and *Agent Orange* simply require the government to continue purchasing or using the product once the government obtains knowledge that the product contains a *potential* defect. Moreover, even if Plaintiffs’ legal and factual contentions were correct—that the government’s knowledge must be “substantially complete” and that this did not occur until 2016—summary judgment is due because it is undisputed that the government continued to purchase and use Defendants’ AFFF after that date.

The DoD (including its component service branches in the Navy, Air Force, and Army) made the discretionary judgment that MilSpec AFFF was (and is) necessary to preserve the lives of military personnel and valuable military assets, despite its knowledge of AFFF’s potential hazards. Second-guessing that judgment is precisely what *Boyle v. United Technologies Corp.*, 487 U.S. 500 (1988), is meant to prevent. The Court should grant summary judgment on Element 1 of the GCD.

ARGUMENT

I. The AFFF MilSpec is “reasonably precise” as a matter of law.

In their opening brief, Defendants showed that the AFFF MilSpec is “reasonably precise” on its face and thus satisfies the first *Boyle* element as a matter of law. Def. Mem. 36–38. To prove that element, Defendants need only show “genuine governmental participation in the design,” *Tozer v. LTV Corp.*, 792 F.2d 403, 408 (4th Cir. 1986)—a standard Defendants meet given that the government itself issued lengthy written product specifications for MilSpec AFFF, *see, e.g., Ramey v. Martin-Baker Aircraft Co.*, 874 F.2d 946, 950 (4th Cir. 1989). That written specification has contained numerous quantitative and qualitative requirements, including the express requirement that AFFF contain “fluorocarbon surfactants” and many other chemical, physical, and performance requirements that constrain AFFF’s design. Def. Mem. 12–19. As

Defendants also demonstrated, for five decades the military updated and issued revisions to the MilSpec, oversaw the private contractors' compliance with those requirements by testing and qualifying AFFF products, researched AFFF's properties, and collaborated with private industry to develop new AFFF formulations. *Id.* at 10–16, 19–26. Given these undisputed material facts, there can be no question that the government actively participated in, and thus approved, the overall design of MilSpec AFFF. That is all that is necessary to meet *Boyle*'s first element.

Rather than refute these facts or distinguish the precedent that renders them dispositive, Plaintiffs ignore them. Instead, Plaintiffs insist that the MilSpec never "expressly required" AFFF to contain PFOS or PFOA. *E.g.*, Opp. 24. From this, they imply that there must be a disputed material fact precluding summary judgment on the issue of whether the government approved "reasonably precise" specifications for MilSpec AFFF that contains PFOS or PFOA or other C8-based fluorosurfactants that may degrade to them.

But Defendants anticipated this very argument: The law is clear that the GCD requires only that the government approve "reasonably precise" specifications for the *overall* product design—not that the government deprive manufacturers of all discretion over implementing that design. Def. Mem. 38–43. That renders Plaintiffs' central premise—that the military never "expressly required" PFOA or PFOS—immaterial as a matter of law. In any case, Plaintiffs' chemistry declarant and their brief both concede that, even today, every qualified MilSpec AFFF formulation contains PFOS or PFOA—as the MilSpec itself acknowledges. *See* Opp. 30.

A. The government's genuine participation in AFFF's overall design establishes that the AFFF MilSpec is "reasonably precise."

1. According to Plaintiffs, the government must "mandate," "dictate," or "explicitly require[]" that MilSpec AFFF contain PFOS or PFOA in order for the AFFF MilSpec to be "reasonably precise." *See, e.g.*, Opp. 1, 10–11, 24, 27–31. That is not the law. Fourth Circuit

precedent only requires the Defendants to show “genuine governmental participation in the design” that “consists of more than a mere rubber stamp.” *Tozer*, 792 F.2d at 408 (citation omitted). In fact, *Dowd* expressly contradicts Plaintiffs’ proposed standard, holding that “government approval of equipment specifications, *not design or dictation* of them, is all that is required” to satisfy the first element of the GCD. 792 F.2d at 412 (emphasis added).

This case meets the Fourth Circuit’s standard, and then some. The government did not just “approve” the AFFF MilSpec; it actually wrote the MilSpec itself, including a broad array of strict requirements on the make-up, characteristics, properties, performance, toxicity, and environmental impact of AFFF and that it “shall” contain “fluorocarbon surfactants.” *E.g.*, Def. Exs. 1–11. For a period spanning five decades—up through and including today—the government then stayed actively involved in overseeing and updating the AFFF MilSpec. *Id.* The evidence of “genuine governmental participation in the design” of MilSpec AFFF is uncontested. Such “participation” and “approval” is all the Fourth Circuit requires.

Rather than confront the Fourth Circuit’s governing standard, Plaintiffs instead invent a different, more demanding standard. To do so, they try to stitch together a series of decisions—none by the Fourth Circuit—to support the proposition that the government must approve the actual alleged defect for the specification to be “reasonably precise.” *See, e.g.*, Opp. 19–20. But the cases Plaintiffs cite are inapposite. For example, Plaintiffs claim *Badilla v. Midwest Air Traffic Control Service, Inc.* held that the government must have ““mandated the action that allegedly violated state law.”” Opp. 20 (quoting 8 F.4th 105, 122 (2d Cir. 2021)) (emphasis in Opp.). But *Badilla*’s holding has nothing to do with the GCD. Rather, it concerns whether the “combatant activities” exception of the Federal Tort Claims Act can protect government contractors.

Plaintiffs cite *Trevino v. General Dynamics Corp.* to state that Element 1 of *Boyle* “means that the discretion over significant details and all critical design choices will be exercised by the government.” *Id.* at 19 (quoting 865 F.2d 1474, 1481 (5th Cir. 1989)). But in *Trevino*, the GCD did not apply because the government merely rubber stamped the product design—defendants simply pointed to “the signature of a government official in a box marked ‘approved’ at the bottom of each of the working drawings” as evidence of approval. 865 F.2d at 1486. But the work was assigned “a relatively low priority” by the government, was “left . . . entirely to the discretion” of the contractor, was overseen by “less experienced engineers/technicians,” and was never subject to a “formal Navy design review.” *Id.* at 1486–87 (citation omitted). The court held that the “mere signature of a government employee on the ‘approval line’ of a contractor’s working drawings, without more, does not establish the government contractor defense.” *Id.* at 1480. That is nothing like this case, in which the government itself issued a MilSpec specifying and constraining AFFF’s design and stayed intimately involved for decades in updating that specification.¹

Citing another combatant activities exception case—*Al Shimari v. CACI International, Inc.*—Plaintiffs also would have the Court believe that the Fourth Circuit disfavors summary judgment on the GCD. Opp. 20–21 (citing 679 F.3d 205, 217 n.10 (4th Cir. 2012)). But *Al Shimari* simply noted in a footnote that *Boyle* created a defense to liability rather than an immunity from suit—it did nothing to disfavor summary judgment on the GCD. In fact, Plaintiffs ignore that the

¹ Of course, to the extent that the statements in *Badilla* and *Trevino* might be thought to contradict Fourth Circuit law, the Fourth Circuit’s decisions would control. In fact, however, both the Second and Fifth Circuits align with the Fourth Circuit in holding that “[t]he purpose of [Element 1 of the GCD] is to exclude from the defense those cases where the Government merely ‘rubber stamps’ a design.” *Lewis v. Babcock Indus., Inc.*, 985 F.2d 83, 86–87 (2d Cir. 1993)); see also *Stout v. Borg-Warner Corp.*, 933 F.2d 331, 334–36 (5th Cir. 1991) (in affirming summary judgment, rejecting plaintiff’s argument that the GCD did not apply because the contractor “was required to comply only with general specifications in designing” the product that did not “prohibit” including a safety device, and holding that the government did more than “rubber stamp[]” the design).

Fourth Circuit has affirmed judgment as a matter of law for defendants on the GCD in *every* case in which the issue has been presented—*Dowd, Ramey, Tozer, Kleemann v. McDonnell Douglas Corp.*, 890 F.2d 698 (4th Cir. 1989), and the Fourth Circuit’s decision below in *Boyle v. United Technologies Corp.*, 792 F.2d 413 (4th Cir. 1986) (per curiam).

This leaves Plaintiffs with one unreported, out-of-circuit, district court decision to support their contention that the GCD cannot apply because Defendants supposedly had a choice between fluorosurfactants that contained or degraded into PFOS/PFOA and those that did not. *See* Opp. 21 (discussing *O’Connor v. Boeing N. Am. Inc.*, 2005 WL 6035255 (C.D. Cal. Aug. 18, 2005)). But this case, too, is inapt: *O’Connor* turned on what the court found to be ambiguity in whether the government left to the contractor the “choice” of using one chemical (“TCE”) instead of others (“other solvents”). *Id.* at *21–22. No such ambiguity exists here. Plaintiffs’ declarant, Mr. Walton, concedes that it is not feasible to manufacture MilSpec AFFF without some amount of “PFOS, PFOA, and other C8 fluorosurfactants in the AFFF concentrates.” Pl. Ex. 23 ¶ 36. By Plaintiffs’ own admission, the “choice” potentially present in *O’Connor* does not exist here, because no matter what fluorocarbon surfactant Defendants chose, it necessarily would have resulted in the final formulation having some amount of PFOS, PFOA, and/or other C8 fluorosurfactants that could degrade to them.

2. The Fourth Circuit is not alone in endorsing summary judgment on the GCD: Defendants cited numerous GCD cases in which courts granted or affirmed judgment to contractors that retained discretion over product design. Def. Mem. 6–8. Plaintiffs’ attempt to distinguish these decisions falls flat. Opp. 21–22 & n.85.

For example, Plaintiffs distinguish *Tozer* because, supposedly, “the Navy had specifically asked the contractor to replace its original design with a different design that the Navy ultimately

approved.” Opp. 22. But it was precisely this “different design” that plaintiffs alleged to be defective in *Tozer* because that design did not include enough redundant fasteners called “camlocs.” *Tozer*, 792 F.2d at 404–05. In holding that the specification was “reasonably precise” as a matter of law, the Fourth Circuit never even mentioned these “camlocs.” *Id.* at 407–08. Instead, the Court agreed that the specifications were more generally “reasonably precise,” in part because the contractor “worked closely with the Navy in developing the specifications for the aircraft.” *Id.* (citation omitted). Likewise, Plaintiffs rely on the *district court* decision to distinguish *Oliver v. Oshkosh Truck Corp.*, Opp. 22, ignoring that the Seventh Circuit affirmed summary judgment for the contractor *even though* the performance-based specification there allowed the contractor to retain “some discretion to position the fuel tanks and exhaust system within the envelope permitted by the specifications.” 96 F.3d 992, 999 (7th Cir. 1996).

Plaintiffs’ footnote (Opp. 22 n.85) purporting to summarily distinguish the many other cases Defendants cite fares no better—the contractors in those cases retained just as much, if not more, discretion with respect to the alleged design defects as Defendants here. For example, Plaintiffs claim that *Gauthreaux v. United States*, 694 F. Supp. 2d 460 (E.D. Va. 2009) (discussed at Def. Mem. 39) is different because the specification contained a “vast number of other detailed” requirements aside from side mirrors. Opp. 22 n.85. Setting aside that the AFFF MilSpec also contains a “vast number of other detailed” requirements, Plaintiffs cannot escape that in *Gauthreaux*, the government’s specification *never even mentioned the alleged defect* (a forklift’s lack of rear and side view mirrors) and yet the court nonetheless held that the specification was “reasonably precise” because there was “government approval of the *overall design*.” 694 F. Supp. 2d at 466, 467 (citation omitted).

As to *Guerinot v. Rockwell International Corp.*, 923 F.2d 862, 1991 WL 4105 (9th Cir.

1991) (table) (discussed at Def. Mem. 40), Plaintiffs claim that the “Navy approved all aspects of [the] design of [the] ejection seat sensor *including the use of [the] Loctite locking agent that caused [the] sensor failure.*” Opp. 22 n.85 (emphasis added). But in *Guerinot*, the government specification required only that the product be made with a “locking agent” and did *not* require the specific, allegedly defective locking agent called Loctite. 1991 WL 4105, at *4. Nevertheless, the Ninth Circuit held that the specification was “reasonably precise” and affirmed summary judgment for the manufacturer. *Id.* at *4–5.

Although Defendants could go on, the cases speak for themselves. At this juncture, the only issue to be decided by the Court is whether the MilSpec was “reasonably precise.” Under the numerous decisions Defendants cited, the undisputed evidence that the government itself issued a specification for AFFF with many quantitative and qualitative requirements—including the express “fluorocarbon surfactant” requirement—establishes, as a matter of law, that it “approved reasonably precise specifications” for AFFF.

B. Plaintiffs’ other “facts” are immaterial.

Plaintiffs contend that a “series of facts defeat every argument that [the MilSpec] is reasonably precise as a matter of law.” Opp. 24. But under Rule 56, “[o]nly disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). Plaintiffs provide no legal authorities showing that their putative facts are material to *Boyle*’s first element under the “governing law.” And Plaintiffs never respond to (in fact, they barely mention) the authorities cited in Defendants’ opening brief to show that such facts are not material, even if they were deemed to be in dispute. *See, e.g.*, Def. Mem. 38–43.

1. For example, Plaintiffs claim that the MilSpec is a “performance specification, not a design specification.” Opp. 24. But they make no effort to confront Defendants’ explanation in

their opening brief that the mere labeling of the AFFF MilSpec as a “performance” specification is immaterial to the GCD. Def. Mem. 41 (citing cases). Indeed, Plaintiffs fail to cite a single legal authority to support their assertion that the mere labeling of the AFFF MilSpec as a “performance” specification somehow defeats summary judgment.

Moreover, even assuming both that a sharp line exists between “performance” and “design” specifications and that the AFFF MilSpec is a “performance specification,” that proves nothing. As Defendants demonstrated in their opening brief, “performance” specifications can still satisfy the first *Boyle* element when, as with the requirements of the AFFF MilSpec, their content relates to or imposes constraints on product design. Def. Mem. 41–43. The Seventh Circuit’s decision in *Oliver* illustrates the point. *See id.* at 41–42. There, the government had issued “performance and dimension specifications” that “cabined” the allegedly defective placement of a military vehicle’s fuel tanks and exhaust system; the Seventh Circuit held that although the defendant “retained some discretion to position the fuel tanks and exhaust system within the envelope permitted by the specifications,” that did not defeat the GCD. 96 F.3d at 998–99. The court reached that conclusion even though it characterized the specifications as “performance” specifications. *Id.* at 998; *accord Kase v. Metaclad Insulation Corp.*, 212 Cal. Rptr. 3d 198, 212 (Cal. Ct. App. 2016) (discussed at Def. Mem. 41–42).

2. Plaintiffs’ second, third, and fourth arguments all belabor the same irrelevant point. Each of these arguments revolves around some variation on the contention that “manufacturers were able to choose any of the thousands of fluorosurfactants available,” because the government did not expressly “direct” or “require” them to “use only two (2) of them,” PFOS or PFOA. Opp. 25–30.

As discussed above, however, the Fourth Circuit does not mandate that a specification

“require” an alleged defect for that specification to be “reasonably precise.” *Tozer*, 792 F.2d at 408 (citation omitted); *see* Def. Mem. 38–41. Thus, Plaintiffs’ various assertions as to whether the government “required” PFOA or PFOS are immaterial under Rule 56. *See, e.g., id.* at 6 n.2 (citing cases). The fact that the AFFF manufacturers retain some discretion over the selection of particular fluorosurfactants provides no basis for denying summary judgment on Element 1. *Id.*

This is especially true because Plaintiffs concede that the MilSpec *does* effectively require Defendants to use some amount of PFOS, PFOA, or other C8 fluorosurfactants that could degrade into them. For example, the “non-C8 derived AFFF product” Plaintiffs identify on the 1982 QPL still contained “1% C8” fluorosurfactants. Opp. 28. And although Plaintiffs insist that the PFOS/PFOA levels in “C6-based” products are low, Opp. 28, 30, Plaintiffs concede that their presence is and always has been inevitable, as the current MilSpec itself acknowledges. *See* Def. Ex. 13 (2020 MilSpec) § 6.6; Pl. Ex. 23 (Walton Decl.) ¶¶ 28, 36.

As the court held in *Kase v. Metaclad Insulation Corp.* (discussed at Def. Mem. 42), certain design features may be “required” by the government in the sense that the government specification “could only be met with” a product with those features. 212 Cal. Rptr. 3d at 213. Here, it is undisputed that PFOS and PFOA are “required,” even if they are sometimes present merely as a manufacturing or degradation byproduct, to the extent that the MilSpec requirements can “only be met with” AFFF products that contain PFOS, PFOA, or other C8 fluorosurfactants that could degrade to them. Therefore, there is no genuine dispute that the MilSpec is “reasonably precise” even as to PFOS/PFOA in particular, because the MilSpec “could only be met with, and thus required,” PFOS or PFOA. *See id.*

3. Plaintiffs also wrongly contend that the MilSpec cannot be “reasonably precise” because the precise chemical formulas of the fluorosurfactants used in Defendants’ AFFF products

are trade secrets. Opp. 31.² Plaintiffs ask, “if the AFFF formulas are proprietary and the government does not know the chemical constituents, how can the government knowingly mandate them?” *Id.* at 32. One answer is that, again, the government need not specifically mandate PFOS or PFOA for it to approve a “reasonably precise” AFFF specification. Another is that the government *can* mandate PFOS/PFOA without knowing the precise chemical formula of the fluorosurfactants because, as a practical matter, only AFFFs containing PFOS or PFOA can comply with all of the MilSpec’s other requirements, a fact that Plaintiffs concede. For both of these reasons, how much the government has known about the chemistry of fluorosurfactants or when it supposedly learned that certain Defendants’ products may contain PFOS or PFOA is immaterial to whether the MilSpec is “reasonably precise” under *Boyle*.

Plaintiffs’ misconstruction of the legal standard and suggestion of immaterial “fact disputes” provide no basis to deny partial summary judgment on Element 1.

II. The government approved reasonably precise specifications for MilSpec AFFF by continuing to purchase and use it with knowledge that it contained an alleged defect.

This case presents a straightforward application of the continuing use doctrine that the Fourth Circuit recognized in *Dowd v. Textron, Inc.*, 792 F.2d 409 (4th Cir. 1986) (per curiam). Plaintiffs allege that long-chain PFAS that may either contain or break down into PFOA or PFOS render MilSpec AFFF defective. For many years—as Plaintiffs concede, by 2000, and in any event by 2009 at the very latest—the government knew of precisely this alleged “defect” in MilSpec AFFF, but continued to purchase and/or use both PFOS-containing (until 2018) and PFOA-

² Although Plaintiffs make much of the history surrounding NRL’s 1966 method patent for AFFF, they do not dispute the core material fact that this patent specifically identified the “fluorocarbon compounds” in AFFF as derivatives of PFOA and PFOS. See Def. Mem. 11. That the USPTO rejected a prior NRL AFFF patent (Opp. 9) only underscores the government’s, including NRL’s, knowledge of fluorosurfactants used in AFFF formulations.

containing (through and including today) AFFF. Def. Mem. 32–35; *see Opp.* 35–37. This is all that *Dowd*, 792 F.2d at 411–12, and its progeny require, and Plaintiffs’ counter-arguments fail.

1. *Dowd* permits Defendants to satisfy the first element of the GCD through evidence of the government’s continued use or purchase of a product with awareness that it contains a potential defect. 792 F.2d at 412. *Dowd* and the cases that follow it do not require that the government instruct the contractor to use the “suspect material” on reorder. *In re Agent Orange Prod. Liab. Litig.*, 517 F.3d 76, 96 (2d Cir. 2008). Rather, simple awareness that the product contains the “suspect material” when reordering or continuing to use it is enough. *Id.*; *see also Dowd*, 792 F.2d at 412; *Lewis v. Babcock Indus. Inc.*, 985 F.2d 83, 89 (2d Cir. 1993).

Unable to dispute the evidence presented by Defendants of “[t]he length and breadth of the [government’s] experience with [MilSpec AFFF]—and its decision to continue using it,” *Dowd*, 792 F.2d at 412, Plaintiffs here again invent a new legal standard, arguing that the continuing use doctrine cannot be met unless the government possessed “actual knowledge of the dangers to humans associated with” PFOA and PFOS. Opp. 23. But of the four cases Plaintiffs cite as supposed support for their “actual knowledge” standard, Opp. 23 n.88, three address *Element 3* of the GCD (which compares the contractor’s knowledge with that of the government),³ and the fourth is *Dowd*, which simply requires that the government know of and have considered the *potential* for an issue. 792 F.2d at 412. And Plaintiffs offer absolutely no authority whatsoever for their related argument that the continuing use doctrine cannot apply unless the government’s knowledge regarding the alleged hazards of a product is “substantially complete.” Opp. 34. The “continuing use” doctrine imposes no such requirement.

³ As Defendants will show at the appropriate time, Plaintiffs misconstrue the law and the government knowledge required even as to Element 3 (which the parties will brief at a later date set by the Court).

To the contrary, the decision most analogous to this litigation, *Agent Orange*, makes clear that neither “actual knowledge of the dangers to humans” nor “substantially complete” knowledge is the applicable legal standard. Rather, *Agent Orange* held that Element 1 of the government contractor defense can be satisfied under the continuing use doctrine so long as the government is aware of the alleged defect but nevertheless makes the decision to continue to purchase and use a product “based on the knowledge available to it at the time.” 517 F.3d at 95–97.

The facts of *Agent Orange* make this clear. The government did *not* have “actual knowledge” that dioxin caused health effects; in fact, the parties hotly contested whether dioxin actually did so. *See In re Agent Orange Prod. Liab. Litig.*, 304 F. Supp. 2d 404, 407 (E.D.N.Y. 2004) (concluding that available scientific evidence did *not* support a finding that Agent Orange caused any disease). The same is true of the parties here, and, at the government’s urging, one court has already concluded that “there is almost no evidence demonstrating any actual impact of PFOS and PFOA on human health.” *Penna v. United States*, 153 Fed. Cl. 6, 44 (2021). Likewise, the latest reports from government agencies similarly note that the science “do[es] not establish causality” between PFAS exposure and any disease. *See, e.g.*, ATSDR’s May 2021 *Toxicological Profile for Perfluoroakyls* at 26 (Dkt. 1596-1); Pl. Ex. 121 at 5.

Other parallels with *Agent Orange* are just as striking. There, plaintiffs alleged that Agent Orange was defective because it contained trace amounts of dioxin. 517 F.3d at 89. Here, Plaintiffs allege that MilSpec AFFF is defective because it contains PFOA/PFOS even in trace amounts. *See Opp.* 1, 30. There, plaintiffs argued that a different manufacturing process would have produced a dioxin-free alternative, while defendants argued that the presence of dioxin was unavoidable. *In re Agent Orange*, 517 F.3d at 93–94. Here, Plaintiffs argue the same as to PFOA/PFOS, *see Opp.* 23, even as their own declarant admits that the presence of PFOA/PFOS

in some amount is unavoidable in MilSpec AFFF, Pl. Ex. 23 ¶¶ 28, 36. There, the government continued to purchase and use Agent Orange, knowing that it contained dioxin. *In re Agent Orange*, 517 F.3d at 94–95. Here, the government has consistently continued to purchase and use AFFF, knowing that it contains PFOA/PFOS. Def. Mem. 32–35. And there, the court affirmed summary judgment for the contractor defendants. 517 F.3d at 82, 91–92. The Court should reach the same result here.

Plaintiffs' only real response is to point out that the Second Circuit found an “issue of fact” on whether defendants could have used an alternative manufacturing method. Opp. 48–49. But that issue was immaterial, because the court went on to examine whether the Army had sufficient knowledge of dioxin’s potential toxicity, and affirmed the district court’s judgment that it did. 517 F.3d at 96–97. Again, this was not based on perfect “actual” knowledge or “substantially complete” knowledge—it was based on the Army’s examination of “the toxicology data *available to it*,” and its subsequent “express determination, *based on the knowledge available to it at the time*” that Agent Orange “should continue to be manufactured and supplied to it.” *Id.* at 95–97 (emphases added).

DoD repeatedly made the same determination with respect to AFFF, based on the knowledge available to it over time. *See, e.g.*, Def. Ex. 95 at ’663 (1995 article expressly recognizing that “the fire safety advantages of using [AFFF] are greater than the risks of potential environmental problems”). More than a decade ago, DoD announced to its component services the potential “human health and environmental risks” of C8-based AFFF, and yet advised that PFOS-containing AFFF “can continue to be used in the United States” and that PFOA-containing AFFF remain on the QPL, and therefore available for purchase and use. Def. Ex. 122.

Indeed, to provide just one specific example, even when Solberg (a former division of

Defendant Amerex Corporation) pressed the Navy in 2014 to revise the AFFF MilSpec to permit the military to purchase and use fluorine-free foams in light of the same alleged health and environmental risks of AFFF asserted by Plaintiffs, the Navy declined to do so; instead, it issued a pointed defense of the MilSpec requirements, emphasizing AFFF’s unmatched firefighting performance and its necessity for military operations. *See* Def. Ex. 139; Def. Ex. 140 (Farley Dep.) 397:12–403:16. Only after the military refused to accept a non-fluorinated product did Solberg formulate and qualify its first MilSpec AFFF to the QPL in 2016. *See* Def. Ex. 99. After Solberg provided data to the Navy showing trace amounts of certain long-chain PFAS compounds in its short-chain C6 product, the Navy continued to buy these Solberg products. *See* Def. Ex. 141; Def. Ex. 142. Thus, if anything, the case for applying the continuing use doctrine is even clearer here than it was in *Agent Orange*. The same result should follow.

2. Lacking a legal reason to forestall summary judgment, Plaintiffs next try to create a regulatory one. Relying on the declaration of Dr. Linda Birnbaum,⁴ Plaintiffs claim that “DoD policy prohibits enacting formal protocols or procedures based on draft EPA guidance or assessment of unregulated chemicals.” Pl. Ex. 6 ¶ 14. According to Plaintiffs, therefore, DoD was not “required” to act with respect to MilSpec AFFF until the EPA issued its Lifetime Health Advisory (“LHA”) in 2016. Opp. 46. Plaintiffs even go so far as to argue that DoD “lacked sufficient authority” to discontinue using MilSpec AFFF until May 2016 because “DoD had not yet received [a] directive from the EPA.” Opp. 47. Here, Plaintiffs conflate the absence of a *requirement* that DoD take action with the absence of DoD *discretion* to take action.

⁴ It is telling that as to “knowledge,” Plaintiffs asked Dr. Birnbaum only to review Defendants’ pre-2000 evidence and not the undisputed facts post-2000. *See* Pl. Ex. 6 ¶ 9. And it is notable that Dr. Birnbaum, a former “federal scientist” who does not claim to have worked with or within DoD, opines on how DoD identifies hazards or what was “sufficient for the DoD to rely upon to make sound management decisions.” Pl. Ex. 6 ¶¶ 2, 11. *See, infra*, note 6.

Moreover, neither Dr. Birnbaum nor Plaintiffs provide any authority for their apparent belief that DoD could not revise *its own military specifications* (as it had done a dozen times previously) or end its purchase and use of MilSpec AFFF without some sort of EPA directive. And the continuing use doctrine has never depended on intra-governmental regulatory policy or authority, even where the alleged defects were potentially subject to such regulation. *See In re Agent Orange*, 517 F.3d at 96 (dioxin). The doctrine also does not depend on the government enacting a so-called “formal policy” regarding an alleged hazard. All that matters is that DoD knew or learned of a *potential* hazard, could have stopped using the products or ordering more, and yet continued to use and/or purchase it. *Dowd*, 792 F.2d at 412.⁵

In fact, Plaintiffs never explain why the 2016 LHA—which is as non-binding as the 2009 Provisional Health Advisory (“PHA”) was—provides the supposedly necessary requirement to act. To the contrary, Dr. Birnbaum herself asserts that EPA *still* has not conducted an “authoritative” assessment of PFOA/PFOS. Pl. Ex. 6 ¶ 15. Under her and Plaintiffs’ reasoning, DoD *still* could not take action as to MilSpec AFFF. But no one—not even Plaintiffs—makes that argument. It is undisputed that DoD—through NAVSEA—has absolute control over what the AFFF MilSpec does and does not require. Def. Mem. 13–19, 36–38. There is no doubt, therefore, that DoD had and retains the *discretion* to act. The GCD is all about that discretion.

3. Stripped of its erroneous legal and regulatory premises, Plaintiffs’ Opposition leaves the Court with a set of core, undisputed facts that compels entry of summary judgment on Element 1 of the GCD based on the continuing use doctrine:

- 1) **DoD continued to purchase and use 3M foam for nearly two decades after 3M’s withdrawal in 2000.** By no later than 2000, the government knew that 3M’s AFFF

⁵ Plaintiffs make passing reference to the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), Opp. 44–45, but they make no argument that CERCLA prevented DoD from acting with respect to the AFFF MilSpec. It does not.

products contained PFOS; that 3M was withdrawing from the PFOS and AFFF markets; and that PFOS was “very persistent,” bioaccumulative, and “could potentially pose a risk to human health and the environment.” Def. Mem. 26–27 (citing Def. Ex. 96). The government continued to purchase 3M’s MilSpec AFFF products through 2001 and continued to use them until at least 2018. *Id.* at 32–33.

- 2) **DoD continues to buy telomer-based foams today, knowing since at least 2000 that they contain long-chain PFAS including potentially PFOA and PFOA precursors.** Def. Mem. 28; *see* Opp. 33–35. The current AFFF MilSpec permits up to 800,000 parts per trillion (ppt) of PFOA/PFOS and acknowledges that PFOA and PFOS are unavoidable in current formulations. *See* Def. Mem. 18 (citing Def. Ex. 13). Current MilSpec AFFF products also still contain some amount of C8 fluorosurfactants, including trace PFOA and/or compounds that may be PFOA precursors. Pl. Ex. 23 ¶¶ 28, 36.
- 3) **EPA found PFOA persistent, potentially bioaccumulative, and toxic by no later than 2002.** In 2002, EPA issued a Draft Hazard Assessment for PFOA, finding PFOA to be persistent, potentially bioaccumulative, and toxic. Def. Mem. 28 (citing Def. Ex. 103).
- 4) **EPA attempted to eliminate PFOA in the United States through its 2006 Stewardship Program.** In January 2006, EPA established the PFOA Stewardship Program, which called for the virtual elimination of PFOA in the United States. EPA’s announcement characterized PFOA as “persistent, bioaccumulative, and toxic,” and stated that it had been found in human blood, and that “animal studies indicated effects of concern” to humans. Def. Ex. 106 (discussed at Def. Mem. 29); *see* Opp. 17, 43.
- 5) **EPA issued a Provisional Health Advisory in 2009 that recommended action be taken.** In January 2009, EPA announced Provisional Health Advisories for PFOA and PFOS in drinking water at 400 ppt for PFOA and 200 ppt for PFOS. Def. Mem. 30–31 (citing Def. Ex. 117). Although Plaintiffs belittle the 2009 PHAs as unimportant or somehow not as “final” as the 2016 LHAs (which themselves are purely advisory in nature, Def. Ex. 123 at 10–11; Def. Ex. 124 at 9–10), the EPA explains that “Provisional Health Advisory values are developed to provide information in response to an urgent or rapidly developing situation. They reflect reasonable, health-based hazard concentrations *above which action should be taken to reduce exposure to unregulated contaminants in drinking water.*” Def. Ex. 117 at 1 n.1 (emphasis added); *see* Def. Ex. 23 at 1 (“DoD used toxicity data from the provisional health advisory to assess risk to human health at its cleanup sites.”).
- 6) **DoD in 2011 explicitly stated that MilSpec AFFF “present[s] human health and environmental risks.”** In 2011, DoD issued a Chemical & Material Emerging Risk Alert for MilSpec AFFF. This alert stated that MilSpec AFFF contains “chemicals that present human health and environmental risks”; in particular, the Alert stated that MilSpec AFFF contained PFOA and/or PFOS, which bioaccumulate, resist degradation, and show evidence of toxicity in laboratory studies. Def. Mem. 31 (citing Def. Ex. 122).

7)

Def. Ex. 111 at 5, 7.

Id. at 5; Def. Ex. 23 at 2; *see* Pl. Ex. 35 (Farley Dep.) 336:2–337:24

).

Plaintiffs do not dispute any of these material facts.⁶ Indeed, they cite and even emphasize many of them. For example, Plaintiffs argue that the 2006 EPA PFOA Stewardship Program should have put Defendants on notice to discontinue AFFF products that contained C8-based surfactants. Opp. 17. But that notice applies equally, if not more, to the government, which itself established that Stewardship Program.

Similarly, Plaintiffs admit that the 2011 DoD Risk Alert described the risks of PFAS in AFFF, “including risks to human health and the environment.” Opp. 46. Even if the earlier evidence was not enough, that should be the end of the inquiry: Plaintiffs admit the government was aware of potential “risks to human health and the environment,” yet continued to order AFFF containing PFOA and use existing stocks of AFFF containing both PFOS and PFOA.

4. The other “factual disputes” Plaintiffs try to create are legally irrelevant to *Dowd* and therefore immaterial under Rule 56, even if credited. For example, Plaintiffs claim that “DoD was unaware” of the presence of “PFOS, PFOA and/or their precursors” in AFFF “before 2000.” Opp. 35. Even if that were true, it is not relevant to the continuing use doctrine. In fact, Plaintiffs’ acknowledgment that DoD *was* aware no later than 2000 that MilSpec AFFF contained PFOA and PFOS compels summary judgment on Element 1. *See, e.g., Gauthreaux v. United States*, 694 F. Supp. 2d 460, 467 (E.D. Va. 2009) (fifteen years of continued use). Thus, the Court need not

⁶ Although Plaintiffs concede that “Rule 56 does not . . . require an expert affidavit,” they assert that Element 1 “obviously requires expert analysis and opinion” about what Plaintiffs call “highly complex subjects.” Opp. 4, 18. But these “highly complex subjects”—like whether toxicological studies established at some point in time that PFAS actually causes human health effects—are immaterial to the continued use doctrine, which asks only whether the government knew of a *potential* risk, not whether that potential risk was an actual risk as a matter of scientific fact. Thus, Plaintiffs’ cases standing for the uncontroversial proposition that expert testimony is needed for technical issues are beside the point. The question of what the government knew and when does not require expert testimony. *E.g., Sutphin v. Ethicon, Inc.*, 2020 WL 2517235, at *4 (S.D.W. Va. May 15, 2020).

resolve *any* purported factual disputes about pre-2000 knowledge in order to find that the government approved reasonably precise specifications under *Dowd*.

For the same reasons, it is also legally irrelevant under *Dowd* whether “3M touted the safety of AFFF” in the 1980s and 1990s, Opp. 37, or whether the telomer-AFFF manufacturers supposedly “[p]rey[ed] on the government’s naivete” and “boasted that their AFFFs were safe and PFOA-free” in the 2000s, Opp. 41–43. As the evidence demonstrates, the government no more suffers from “naivete” here than did the Army constitute a “beguiled and unsophisticated consumer” in *Dowd*. 792 F.2d at 412. It is undisputed that the government knew of the potential risks by 2000 (and certainly by no later than January 2009), that it continued to use AFFF containing PFOS or PFOA thereafter, and that it continues to use and purchase MilSpec AFFF containing long-chain fluorocarbon surfactants to this day. Thus, the “fact disputes” posited by Plaintiffs are little more than yet another effort to collapse Element 1 of the GCD into Element 3.

Even were they relevant, however, Plaintiffs fail to establish that the government relied on any so-called “drumbeat of misleading statements” from telomer-AFFF manufacturers in the 2000s. Opp. 43. In fact, Plaintiffs fail to establish that any government employee ever even saw the documents Plaintiffs claim are misleading. Opp. 41–43. Similarly, Plaintiffs do not cite a *single piece of evidence* for their contention that “DoD did not act until 2016,” in part, “due to industry’s lack of transparency.” Opp. 43–44. As the DoD Inspector General pointed out, [REDACTED]

[REDACTED] See Def. Ex. 109 at ’003–004. [REDACTED]

[REDACTED] See *id.* Like Plaintiffs’ many incorrect legal arguments, these irrelevant attacks do not prevent summary judgment.

5. In the final analysis, however, summary judgment should be entered even if the Court assumes the truth (and legal relevancy) of Plaintiffs’ fundamental premise—that DoD did

not have “full” or “substantially complete” knowledge of MilSpec AFFF’s alleged defects until 2016. Plaintiffs’ own declarant admits that even today MilSpec AFFF contains PFOA or PFOS. Pl. Ex. 23 ¶¶ 28, 36. Plaintiffs have never suggested that there is some level of PFOA or PFOS (or any other long-chain fluorochemicals) in MilSpec AFFF that is safe—to the contrary, they have built their case on the notion that single-digit parts per trillion levels are hazardous. Conversely, they also do not argue that the use of C6 fluorocarbon surfactants or fluorocarbon surfactants other than PFOA or PFOS makes MilSpec AFFF defective. And they do not dispute that the government continued to use 3M’s AFFF until at least 2018 and continues to purchase and use telomer-based MilSpec AFFF *right now* that contains the allegedly defective ingredient(s). Def. Mem. 32, 34. Under *Dowd*, even using 2016 as the watershed event, the government has approved reasonably precise specifications.

As a matter of law, the government’s continued purchase and use of MilSpec AFFF products both previously and currently on the QPL establishes that the government approved reasonably precise specifications under *Dowd* and its progeny.

CONCLUSION

Based on the two independent grounds set forth above, Defendants respectfully request that the Court hold that the AFFF MilSpec meets the first element of *Boyle* as a matter of law.⁷

⁷ In a footnote, Plaintiffs point out that Defendants’ motion did not specifically address claims like failure to warn. See Opp. 21 n.83. Although the GCD, in fact, applies to all types of claims, see e.g., *Sawyer v. Foster Wheeler LLC*, 860 F.3d 249, 256 (4th Cir. 2017) (failure to warn); *Richland-Lexington Airport Dist. v. Atlas Props., Inc.*, 854 F. Supp. 400, 405 (D.S.C. 1994) (state statutory and common law claims); *Koohi v. United States*, 976 F.2d 1328, 1336–37 (9th Cir. 1992) (federal statutory claim), Plaintiffs’ contention ignores the purpose of the present briefing. Under CMO 16C, the application of the GCD to specific claims will be addressed in subsequent briefing.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on January 28, 2022, I electronically filed the foregoing document with the Clerk of the Court using CM/ECF. I also certify the foregoing document is being served this day on all counsel of record in this case via transmission of Notice of Electronic Filing generated by CM/ECF.

/s/ David E. Dukes _____

David E. Dukes